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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,904	06/04/2001	Jason Dove	CLX016 US	3735
34036	7590	04/01/2005	EXAMINER	
SILICON VALLEY PATENT GROUP LLP 2350 MISSION COLLEGE BOULEVARD SUITE 360 SANTA CLARA, CA 95054			PHAN, MAN U	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,904

Applicant(s)

DOVE ET AL.

Examiner

Man Phan

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 2 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/07/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The application of Dove et al. for a "Traffic merging system" filed 06/04/2001 has been examined. Claims 1-21 are pending in the application.

Claim Rejections - 35 USC ' 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 recites limitation "the payloads" in line 2.

Claims 9, 10 recites limitation "the port" in line 1.

Claim 17 recites limitation "the DSO" in line 1.

There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC ' 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-12 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosein (US#6,735,191) in view of Pierson, Jr. (US#6,633,566).

With respect to claims 1, 3-12 and 16-19, Hosein (US#6,735,191) and Pierson, Jr. (US#6,633,566) disclose a novel method and system for traffic flow control in data switches utilizing the synchronization of extended superframes, according to the essential features of the claims. Hosein discloses a method and apparatus for transporting TDM voice traffic over an ATM network. A first plurality of TDM voice traffic circuits, such as T1 or E1 circuits, are multiplexed to create a first rt-VBR virtual circuit such that the bandwidth of the first rt-VBR virtual circuit is not limited. A second plurality of TDM voice traffic circuits are multiplexed to create a second rt-VBR virtual circuit such that the bandwidth of the second rt-VBR virtual circuit is not limited. This may be done by AAL2 multiplexing with substantially large SCR, PCR and MBS values. The first and second rt-VBR virtual circuits are combined for transport over a link in the ATM network. An overload and/or admission control process may be performed based on the ATM network link utilization. The TDM voice traffic AAL2 multiplexing uses silence suppression and may or may not use voice compression (Fig. 1; Col. 3, lines 9 plus and Col. 4, lines 22 plus). Hosein further teaches in Fig. 2 a flow diagram illustrated of a method for transporting voice traffic over an ATM network, in which at step 410, a number of voice traffic channels, such as 24 DS0 channels, are combined at a TDM unit into a single T1 circuit. At step 420, a number of these T1 circuits are combined at an AAL2 adaptation layer unit to create a rt-VBR virtual circuit using SCR, PCR and MBS values that do not restrict the bandwidth of the rt-VBR virtual circuit, such as substantially large SCR, PCR and MBS values.

Finally, a number of these rt-VBR virtual circuits 210 are combined at an ATM multiplexing unit for transport over an ATM network pipe at step 430 (Col. 4, lines 42 plus).

Hosein differs from the claims in that the claims require the positioning each of the plurality of messages at a common location within superframe wherein the frame position field value contained within each of the messages are identical. In the same field of endeavor, Pierson, Jr. (US#6,633,566) discloses in Figs. 2 & 3 the diagrams illustrated structures of T1 frame and its extended superframe, which is a group of 24 T1 frames that can be carried by T1 line. An Extended Superframe (ESF) consists of frame bit section 305 and a payload section 310. Frame bit section 305 consists of 24 frame bits that can be one of three different types. Six of the frame bits are synchronization bits ("S" bits). An ESF framer uses the S bits to determine the start of an Extended Superframe (Col. 7, lines 52 plus). Pierson, Jr. further teaches in Fig. 5 an operational flow chart illustrated the steps for interfacing a TDM T1 link with an cell-switched ATM network, and Fig. 6 is an operational flowchart that illustrated the steps in configuring the T1/ATM interface (Col. 10, lines 64 plus).

It's noted that telecommunications industry has developed schemes for transmitting telephony signals, which are usually in the form of time division multiplex (TDM) signals that have been formatted into asynchronous transfer mode (ATM) cells over a physical layer interface, such as a synchronous optical network (SONET) interface. The SONET uses an industry-standard framed transmission format in which signals are transmitted in SONET superframes each having a duration of 1 ms. Each SONET superframe is divided into 8 SONET frames each having a duration of 125 .mu.s. Each SONET frame includes a plurality of cells each adapted to carry data in the ATM format. Digital video signals and computer data signals

are usually carried in the ATM format whereas telephony signals are usually carried in the TDM format. Systems and methods have been developed to carry both telephony and digital video signals over the same communications network. Methods have been developed to convert the TDM format into the ATM format such that both telephony and digital video signals can be transmitted over a single physical layer interface.

Regarding claims 20, 21, they are system claims corresponding to the method and apparatus claims 1, 3-12 and 16-19 above. Therefore, claims 20, 21 are analyzed and rejected as previously discussed with respect to claims 1, 3-12 and 16-19.

One skilled in the art would have recognized the need for effectively and efficiently processing telecommunications signaling in SONET frame data between different line rates, and would have applied Pierson Jr.'s novel use of the extended superframe in configuring T1/ATM interface into Hosein's teaching of the combine traffic for interfacing a TDM link with a cell-switched ATM network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Pierson, Jr.'s method, apparatus and computer program product for interfacing a TDM link with a cell-switched network into Hosein's method and apparatus for transporting TDM voice traffic over an ATM network with the motivation being to provide a method and system for performing transfer connections of SONET framed data between different line rates.

5. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosein (US#6,735,191) in view of Pierson, Jr. (US#6,633,566) as applied to the claims above, and further in view of Stevenson (US#5,889,773).

With respect to claims 13-14, Hosein and Pierson Jr. disclose the claimed limitations as discussed in the paragraph 4 above. The claims further require the use of microsecond frames in each superframe. In the same field of endeavor, Stevenson, III discloses in Figs. 3A-B the protocol description mapping for converting time division multiplexed telephony traffic into an asynchronous transfer mode format. Telephony traffic within host digital terminal 118 is carried in a 1-millisecond superframe 220 consisting of eight 125-microsecond frames 222 to permit the transport of bit oriented signaling associated with standard telephony traffic. Each frame 222 has a subscriber bus interface format 224 comprised of a 32-byte timeslot data stream, each timeslot byte having a 16-bit interleaved data format 223 such that two separate bit interleaved data streams are supported by subscriber bus interface format 224. The odd bit positions of the 16-bit interleaved data format 223 carry the actual transported data and the even bit positions are reserved for future expansion. Thus, only one of the separate bit interleaved data streams will be considered here. Subscriber bus interface format 224 carries internal system communication, and the user information with out-of-band bit oriented signaling for twenty-four DS-0 signals or one VT1.5 signal (Col. 3, lines 56 plus).

One skilled in the art would have recognized the need for effectively and efficiently processing telecommunications signaling in SONET frame data between different line rates, and would have applied Stevenson, III's protocol description mapping between the telephony traffic and ATM cell format, and Pierson Jr.'s novel use of the extended superframe in configuring T1/ATM interface into Hosein's teaching of the combine traffic for interfacing a TDM link with a cell-switched ATM network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Stevenson, III's method and

apparatus for placing TDM telephony traffic into an ATM format, and Pierson, Jr.'s method, apparatus and computer program product for interfacing a TDM link with a cell-switched network into Hosein's method and apparatus for transporting TDM voice traffic over an ATM network with the motivation being to provide a method and system for performing transfer connections of SONET framed data between different line rates.

Allowable Subject Matter

6. Claims 2 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. The following is an examiner's statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose or suggest wherein merging payloads of the at least two messages containing identical frame position field values to create a merged payload, and routing the merged payload to a port, and wherein the message that are not merged are positioned at locations within the 6 millisecond superframe independent of the frame position field values within each message that is not merged, as specifically recited in claims 2, 15.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dove et al. (US#6,310,891) discloses a method of scheduling TDM cells in a SONET.

Dove et al. (US#6,169,749) discloses a method of sequencing TDM cells in a SONET.

Dove et al. (US#6,798,784) discloses a concurrent switching of synchronous and asynchronous traffic.

Dove et al. (US2004/0246977) discloses a backplane bus.

Brolin et al. (US# 6,359,859) discloses a architecture for a hybrid STM/ATM add drop multiplexer.

Lyon (US# 6,721,273) discloses a method and apparatus for traffic flow control in data switches

Varma et al. (US#5,621,773) discloses a method and apparatus for fast synchronization of T1 extended superframes

Chow et al. (US#6,408,033) discloses a method and apparatus for superframe bit allocation.

Roposh (US#5,396,494) discloses a method for operating an asynchronous packet bus for transmission of asynchronous and isochronous information.

Shaunfield (US#5,867,484) discloses a switchable multi-drop video distribution system.

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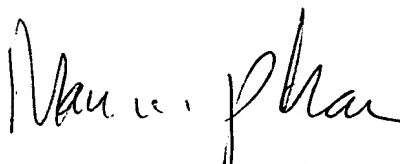
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149.

The examiner can normally be reached on Mon - Fri from 6:00 to 3:00 EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

03/28/2005.


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PRIMARY EXAMINER